



Docket No.: HI-0207

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Gang Hoon LEE and Jai Hyun JO

Confirmation No.: 5506

Serial No.: 10/502,088

Group Art Unit: 3677

Filed: 7/22/2004

Examiner: Mark T. Vogelbacker

Customer No.: 34610

For: HINGE STRUCTURE FOR FLAT VISUAL DISPLAY DEVICE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

U.S. Patent and Trademark Office
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401 Dulany Street
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Sir:

On March 28, 2006, Applicants filed an Amendment After Final Rejection in response to the Final Rejection dated January 24, 2006. Applicants subsequently received an Advisory Action dated April 12, 2006. The Advisory Action indicated that the Amendment After Final Rejection was entered, but that the rejections are maintained. Applicants request review of the Final Rejection. No further amendments are being filed with this Request. This Request is being filed with a Notice of Appeal. The review is requested for the reasons stated below.

Claims 2, 4, 7-9, 12-14, 18-24 and 26-32 are pending in the Application. In the Amendment After Final Rejection, claims 7, 8, 14, 17, 20 and 26 were amended and claims 15-17 and 25 were canceled. Claims 12, 13 and 27-32 are indicated as withdrawn.

It appears that the Examiner is now rejecting claims 2, 4, 7, 9, 14, 18, 19, 20-23 and 26 under 35 U.S.C. § 103(a) over U.S. Patent Publication No. 2001/0052167 to Cho (hereinafter "Cho"), in view of U.S. Patent No. 5,406,678 to Rude et al. (hereinafter "Rude"), and further in

view of U.S. Patent No. 5,682,645 to Watabe et al. (hereinafter "Watabe"). It is respectfully submitted that the rejection is improper and should be withdrawn.

Cho, in Fig. 1, discloses a fixed bracket 1, rotating brackets 2, and a shaft 3 coupled both to the fixed bracket 1 and the rotating brackets 2. As disclosed in Fig. 1 of Cho, the shaft 3 is coupled to opposing sides of the fixed bracket 1. A rotating angle limiting washer 5 is positioned between the shaft 3 and the pivotal plate 2. Various oil washers 6, a separating tension washer 7, and a fixing ring 8 are then mounted to a round bar portion on an end of the shaft 3.

To hold Cho's hinge assembly together and apply proper torque, friction, or force to the shaft 3, the end of the round bar of the shaft 3 is deformed by impact so that the deformed portion of the bar pushes all of the various washers 6-8 laterally (see, for example, Fig. 2, page 1, paragraph [0009] of Cho). Cho further discloses that the deformation of the shaft end caused by impact does not enable resetting of the hinge assembly once assembled, or fine tuning the amount of lateral force applied to the washers 6-8 on the round bar so that a proper torque is applied to the shaft 3. As acknowledged by the Examiner, Cho also lacks a braking member as recited in claim 14, or a braking unit as recited in claim 20.

Rude discloses a friction hinge assembly having a band 21 with a circular portion 25 that wraps around a shaft 17 (see, for example, Figs. 3 and 4 of Rude). Similar circular portions that wrap around the shaft are also shown in Figs. 6, 7, 9, 10 and 11 of Rude. In the various views of Rude, the band 21 may be formed separate from the bracket 19 as shown in Fig. 3, or the band may be an integral part of the bracket 47 as shown in Fig. 11. Rude discloses that the wrap around band 25 applies a different amount of restraining torque to the shaft depending on the direction of the wrap 25 of the band 21 and the direction that the shaft is rotating. The highest

torque is applied when the shaft is rotated in the same direction that the band tightens. A torque resistance of roughly one-half to three quarters occurs when the shaft rotates in the opposite direction (see, for example, col. 1, lines 29-40 of Rude).

Watabe discloses a control assembly for a hinge connection. In this assembly, a braking member 6 is surrounded by a holding member 5 made of steel. The braking member 6 and holding member 5 wrap around a pivot shaft 3 which remains stationary (see Fig. 3 of Watabe). As shown in the various Figures in Watabe, there is nothing located between the elongated planer portions of the braking member and holding member.

Claim 14 is directed to a hinge structure that includes a braking member having a frictional face contacting with a rotation shaft and braking-tightening planes that extend from the frictional face. Claim 14 recites that the braking tightening planes have contact faces into which a leaf spring and a braking-adjustable member are inserted for adjusting braking force. Claim 14 further recites a braking housing around the braking member for maintaining a strength of the braking member.

As noted above, Cho lacks any structures that would correspond to the claimed braking member, braking housing or leaf spring. Cho also lacks any structure that would correspond to the claimed braking-adjustable member for adjusting braking force. As noted above, once the Cho hinge is assembled, the braking force cannot be adjusted.

If one were to consider the band 21 of the Rude friction hinge to correspond to the claimed braking member, the Rude band 21 clearly lacks braking-tightening planes that extend from the frictional face. Rude also lacks the recited leaf spring and braking-adjustable member for adjusting braking force. Again, as noted above, the frictional force provided by the Rude

structure cannot be adjusted. The Rude structure also lacks a separate braking housing around the braking member for maintaining a strength of the braking member.

The Watabe structure includes a braking member 6 with braking-tightening planes 14/15 that extend from the frictional face. However, the Watabe structure lacks the claimed leaf spring located between the contact faces of the braking-tightening planes. The Final Rejection asserts that the braking-tightening planes 14/15 themselves comprise the claimed leaf spring. But it makes no sense to say that the braking-tightening planes are themselves a separate leaf spring located between contact faces of themselves. The Watabe structure, like the Cho and Rude structures, simply lack the claimed leaf spring.

Because none of the cited references include all the features recited in claim 14, it is respectfully submitted that the rejection of claims 14, 18 and 19 is improper and should be withdrawn.


Claim 20 is also directed to a hinge structure that includes a braking unit. Claim 20 recites that the braking unit includes a braking member that includes a two tightening plates joined by a substantially cylindrical friction portion which surrounds an outer circumference of a rotation shaft and which is configured to apply friction to the rotation shaft to limit movement of the rotation shaft. Claim 20 further recites that the braking unit includes a leaf spring that is interposed between the tightening plates, and a fastener configured to adjust a spacing between the tightening plates, to thereby vary an amount of friction applied to the rotation shaft by the braking member.

As noted above, none of the cited references include a braking member with two tightening plates joined by a substantially cylindrical friction portion, and a leaf spring that is interposed between the tightening plates. Specifically, none of the references disclose or suggest

providing a leaf spring between the tightening plates of a braking member. Accordingly, it is respectfully submitted that the rejection of claim 20, and claims 2, 4, 7, 9, 21-23 and 26 which depend from claim 20, is improper and should be withdrawn.

Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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Date: April 24, 2006